

Answer on Question #47138 - Math – Calculus

Check whether the function $f: \mathbb{R} \rightarrow \mathbb{R}$ given by $f(x) = |x| - x$ is one one onto give reason for your

Solution.

$$f(x) = |x| - x = \begin{cases} 0, & x \geq 0 \\ -2x, & x < 0 \end{cases}$$

$f(x)$ is not one-to-one function because $f(x) = 0$ for all $x \geq 0$.

$f(x)$ is not onto function because values less than 0 on the y-axis are never used.